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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,511	03/27/2007	Markus Vos	2133.126USU	8935

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EXAMINER

GHYKA, ALEXANDER G

ART UNIT	PAPER NUMBER
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2812

MAIL DATE	DELIVERY MODE
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03/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,511	Applicant(s) VOS, MARKUS	
	Examiner ALEXANDER G. GHYKA	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-50 is/are pending in the application.
- 4a) Of the above claim(s) 45-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/7/06; 5/02/06; 8/13/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I (Claims 26-44) in the reply filed on 12/17/2008 is acknowledged. The traversal is on the ground(s) that the Office action has focused on the differences within the Claims but has failed to consider the common features; and that the search and examination of the entire application can be made without serious burden. This is not found persuasive because a single general inventive concept has not been shown, and the intermediate product and process contain elements which are mutually exclusive. Moreover, the product and the process are classified in two different classes and therefore at least the search would comprise a substantial burden.

The requirement is still deemed proper and is therefore made FINAL.

Claims 26-44 are now under consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-33 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gantley (US 4,138,304).

The present Claims require a process for producing a plurality of components, comprising the steps of; joining a first surface of a substrate to a first surface of a carrier with a bonding force; machining the plurality of components out of the substrate, with the plurality of components being held together by the carrier at least immediately after they have been machined out; releasing the bonding force between the carrier and the plurality of substrates; and detaching the plurality of components from the carrier in order to separate the plurality of components.

With respect to Claim 26, Gantley disclose a method for producing a a plurality of components, which comprises the following steps: making available a substrate (30), making available a support (40), connecting (joining) the first surface of the support (40) (column 6, lines 5 to 24); machining the components of the substrate (30); releasing the adhesive force of the support (see column 7, lines 36 to 60), and detaching of the components from the support (40) so as to separate the components (column 6, line 66 to column 8, line 23).

Gantley differs from the present Claims in that it does not explicitly disclose “with the plurality of components being held together by the carrier at least immediately after they have been machined out”.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to arrive at the present Claims as Gantley disclose releasing the adhesive force after machining, and the selection of any order of performing process steps, including delays between steps, is *prima facie* obvious in the absence of new or unexpected results. See *In re Burnhans* , 154 F. 2d 690, 69 USPQ 330 (CCPA 1946).

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With respect to Claim 27, the plurality of components are separated from one another laterally during the machining step, as Gantley discloses sawing the wafer pellets. See column 2, lines 45-55.

With respect to Claim 28, the substrate comprises glass. See column 1, lines 30-35.

With respect to Claim 29, the carrier comprises a carrier film 39. See column 6, lines 10-20.

With respect to Claim 30, Gantley discloses the step of machining comprises removing material from a second surface of the substrate, the second surface being on the opposite side of the substrate from the first surface, the material removed being at least as far as the first surface of the substrate. See column 7, lines 35-60.

With respect to Claim 31, the step of machining comprises removing a portion of material from the first surface of the carrier. See column 7, lines 35-60.

With respect to Claim 32, the step of machining comprises removing portions of the substrate and the carrier in succession until a position between the first surface and a second surface of the carrier material is reached. See column 7, lines 35-60.

With respect to Claim 33, the step of machining comprises machining a multiplicity of laterally adjacent components out of the substrate in one working step. See column 7, lines 35-60.

With respect to Claim 38, the wafer has devices on one side. See Figure 6, (30) and corresponding text.

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With respect to Claim 39, the detaching step comprises using a vacuum to separate the plurality of components from the carrier. See column 6, lines 5-10 and column 8, 5-15.

Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gantley (US 4,138,304) as applied to claims 26-33 and 38-39 above, and further in view of Duran et al (US 4,828,052).

Gantley is relied upon as discussed above.

However Gantley yet al does not disclose vibratory lapping (ultrasound drilling).

Duran et al disclose an ultrasonic drilling apparatus. With respect to Claim 40, Duran et al disclose that ultrasonic drilling is used to machine ceramics, glasses and refractory materials. .See column 1, lines 10-15.

It would have been obvious for one of ordinary skill in the art to modify the disclosure of Gauntley et al and use an ultrasonic device as disclosed by Duran et al for its benefit in machining hard surfaces. The use of a known device, ultrasonic drill, for its known benefit, machining hard surfaces, would have been *prima facie* to one of ordinary skill in the art.

With respect to Claim 35, the Examiner takes Official Notice that it is known to dice a substrate by drilling overlapping punches.

With respect to Claim 36, Duran et al discloses a ring structure. See column 4, lines 20-30 and Figures 1-3.

With respect to Claim 37, Duran et al disclose the use of a slurry. See column 3, lines 10-20.

Claims 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gantley (US 4,138,304) as applied to claims 26-33 and 38-39 above, and further in view of Dietz (US 2003/0148057) .

Gantley is relied upon as discussed above.

However Gantley et al does not disclose the use of a soldering agent.

Dietz et al disclose a method for separating glass sheets in the manufacture of electronic components. See paragraphs 2-4.

With respect to Claim 34, Dietz disclose the application of the solder to the surfaces being separated by printing. See paragraph 21.

It would have been obvious for one of ordinary skill in the art, at the time of the invention, to use a solder in the process of Ohmi et al, for its benefit in joining together surfaces which are going to be machined, as disclosed by Dietz. The use of a known compound, solder, for its known benefit, immobilizing surfaces which will be machined, would have been *prima facie* obvious to one of ordinary skill in the art.

With respect to Claim 41, Ohmi et al disclose the application of protective layers to the substrate. See column 6, lines 5-60.

With respect to the order of the steps as required by Claims 43-44, as the cited prior art disclose all of the layers and steps, and the selection of any order of

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performing process steps is *prima facie* obvious in the absence of new or unexpected results. See *In re Burnhans* , 154 F. 2d 690, 69 USPQ 330 (CCPA 1946).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEXANDER G. GHYKA whose telephone number is (571)272-1669. The examiner can normally be reached on Monday through Friday 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571) 272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AGG
March 12, 2009

/Alexander G. Ghyka/
Primary Examiner, Art Unit 2812

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